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DEBORAH G. BLAKLEY

Remarks:

In re application of	:	
Donald T. Cronic	:	
Attorney Docket No.: 84333	:	Art Unit: 1746
Serial No.: 10/675,598	:	
Filed: September 26, 2003	:	Examiner: Bruce F.
For: USING SOLIDS AS PEROXIDE	:	Bell
SOURCE FOR FUEL CELL APPLICA-	:	
TIONS, PROCESS AND PRODUCT	:	
THEREOF	:	

Faxed herewith please find a Transmittal Form and Reply Brief Under 37 CFR §41.41 for referenced application.

PTO/SB/21 (09-04)

Approved for use through 07/31/2006. OMB 0651-0031

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**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

4

Application Number	10/575,598
Filing Date	September 28, 2003
First Named Inventor	Donald T. Crance
Art Unit	1746
Examiner Name	Bruce F. Bell
Attorney Docket Number	Navy Case 84333

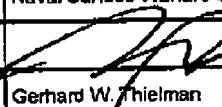
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<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
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Remarks

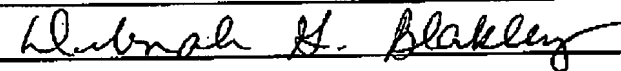
Reply Brief under 37 CFR 41.41 for October 4, 2007 Examiner's Answer

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Naval Surface Warfare Center - Dahlgren Division		
Signature			
Printed name	Gerhard W. Thielman		
Date	November 20, 2007	Reg. No.	43,186

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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant : Donald T. Cronic
Serial No. : 10/675,598
Filed : September 26, 2003
Title : USING SOLIDS AS PEROXIDE SOURCE FOR FUEL CELL APPLICATIONS,
PROCESS AND PRODUCT THEREOF

Group Art Unit : 1746
Examiner : Bruce F. Bell
Docket : Navy Case 84333

Mail Stop: Board of Patent Appeals and Interferences
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY BRIEF UNDER 37 CFR §41.41

In response to the October 4, 2007 Examiner's Answer under 37 CFR §41.39, the shortened statutory period for reply effectively ending December 4, 2007, please consider the following:

Remarks at pages 2-3.

CERTIFICATE OF TRANSMISSION / MAILING

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Date: 11/20/07 Name: Deborah G. Blakley
Deborah G. Blakley

Appellant : Donald T. Cronce
Serial No. : 10/675,598
Filed : September 26, 2003
Page : 2 of 3

Attorney Docket No.: Navy Case 84333

REPLY BRIEF
UNDER 37 CFR §41.41

REMARKS

Appellant hereby responds to the Grounds of Rejection (item 9) and Response to Arguments (item 10) in the Examiner's Answer at pages 3-13. Appellant acknowledges the remaining portions of the Examiner's Answer without further comment.

The Examiner's Answer reiterates the rejection of claims 1-9 and 12-20 as being allegedly obvious and thereby unpatentable under 35 U.S.C. §103(a) over U.S. Patent 6,255,009 to Rusek *et al.* (hereinafter "Rusek") in view of U.S. Patent 4,867,902 to Russell.

In the Grounds, the Examiner's Answer asserts at page 3 that Rusek discloses potential chemical energy production using hydrogen peroxide as an impellant by decomposition. The Examiner's Answer concedes at page 5 that Rusek fails to disclose peroxide in solid form, but asserts that Russell compensates for Rusek's lack of solid peroxide by teaching an oxygen-generating microencapsulated composition. The Examiner's Answer further asserts at page 6 that a person of ordinary skill in the art would be motivated to substitute a solid impellant for controlled release over hydrogen peroxide having rapid and uncontrollable heat generation.

Appellant respectfully disagrees, noting that Rusek teaches controlled containment and release of hydrogen peroxide from a holding tank 60 through a valve 65 to a catalytic decomposition chamber 70, thereby providing power or other system products on demand. See *e.g.*, col. 5, lines 43-48 and Fig. 2 of Rusek. Thus, the control motivation cited by the Examiner's Answer is adequately addressed by the primary reference. Moreover, Appellant's claimed features provide the advantage of improved safety and convenience from impellant in solid, rather than liquid, form. Neither Rusek nor Russell teach or suggest this advantage, *mutatis mutandis*. Further, Russell teaches oxygen production for respirators and rebreathers, and thus minimizes heat generation. See *e.g.*, col. 1, lines 22-24 and col. 4, lines 1-4 of Russell.

In the Response, the Examiner's Answer shows agreement with Appellant's description of the claimed features. However, the Examiner's Answer disagrees with Appellant's comments on motivation to combine the references and conclusions drawn therefrom, but rather at page 9 that Russell exposes potassium superoxide to water for releasing oxygen and at page 10 that Russell's encapsulating polymer slows the reaction by exfoliation, thereby providing control.

Appellant : Donald T. Cronce
Serial No. : 10/675,598
Filed : September 26, 2003
Page : 3 of 3

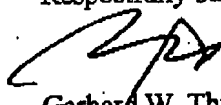
Attorney Docket No.: Navy Case 84333

REPLY BRIEF
UNDER 37 CFR §41.41

Appellant respectfully disagrees. First, Russell fails to teach solubilizing the solid peroxide as provided in Appellant's claims, but rather describes its permeated exposure from polymer swelling in the presence of moisture. See col. 3, lines 51-57 of Russell. Second, the microencapsulation of the peroxide by Russell provides preset (at low levels to mitigate thermal byproduct), rather than controllable, decomposition, presumably to enhance safety in application and reduced production cost. By contrast, Rusek controllably releases hydrogen peroxide from a reservoir by a valve to enable an operable range of heat generation for power. Thus, Russell provides objectives contrary to those of Rusek's power generation system.

Appellant recognizes that the Examiner employs the applied references, Rusek and Russell, together to render a decision of obviousness. However, Appellant disagrees that an artisan of ordinary skill would discover motivation to concatenate their teachings, as the latter desires to mitigate rather than produce heat for power generation sought by the former for reasons mentioned *supra*, and thus the references teach away from each other. Appellant respectfully submits that the Patent Office fails to satisfy the requirements of obviousness, and thus that claims 1-9 and 13-20 are patentably distinguishable over the combination of Rusek and Russell under 35 U.S.C. §103(a), contrary to the Final Rejection and the Examiner's Answer. Appellant respectfully requests this Honorable Board to reverse the rejection of the claims and to pass this application to issue.

Respectfully submitted,



Gerhard W. Thielman
Registration No. 43,186

Date: November 20, 2007

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